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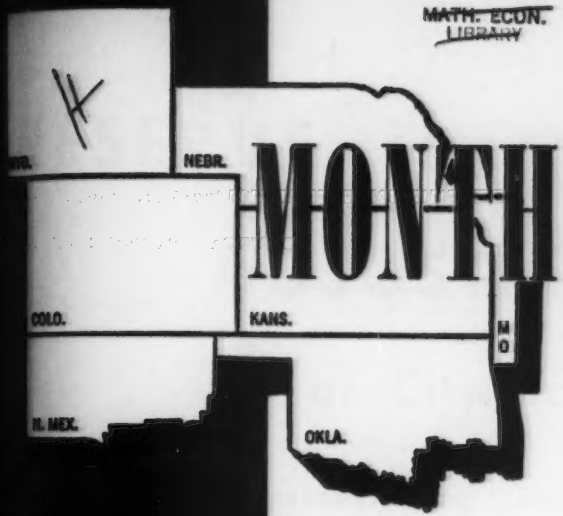
February 1958



MONTHLY REVIEW

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FEDERAL RESERVE BANK OF KANSAS CITY

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RESERVE ADJUSTMENTS of City Banks

THE DISTRIBUTION OF BANK resources among loans to customers, primary and secondary reserves, and the bond account is one of the major decisions relating to bank asset management. Such decisions often are based on an estimate of the need for liquidity to meet deposit losses or to satisfy loan requests, as well as on expectations about future movements of interest rates. The degree of confidence placed in the reliability of such estimates also is important. Allowance must be made for the fact that deposits fluctuate—sometimes predictably but often without warning—which at times raises the investible reserves of the bank and at other times reduces them.

In this respect, the unique characteristic of large banks compared with smaller institutions is that while the day-to-day fluctuations of reserves are relatively small in percentage terms, the amount is large enough to justify special action to gain earnings on these transitory balances. Larger banks in the Tenth Federal Reserve District encounter widely varying conditions with respect to the short-run volatility of their deposits. In banks where the accounts of oil companies represent a substantial part of the total, intramonth fluctuations are quite wide but have a fairly regular timing and magnitude. Some of the banks in which interbank deposits are important also experience distinct seasonal deposit flows. In still others, state funds produce both predictable and unforeseen changes in deposits. All of these movements, together with the ebb and flow of other depositors' accounts, may either yield short-run gains of reserves or result in short-run losses.

It is common knowledge that, despite this somewhat random movement of deposits and reserves, larger banks are able to hold their excess reserves to low levels, measured in terms of absolute values or percentages. Not so well known is the fact that rather wide disparities exist between the comparative performance of larger banks in minimizing their excess reserves. District reserve city banks, for example, maintain relatively high excess reserves in comparison with the national average for all reserve city banks. This fact is often attributed to time differences between New York and District municipalities which make adjustment through the federal funds market more difficult. Another argument is that banks in District cities having no Federal Reserve office are handicapped in adjusting reserves through the use of discounting. It appears, however, that the widely varying holdings of excess reserves by larger District banks cannot be explained by these factors.

Reserve Adjustments

It is the purpose of the ensuing discussion to examine the nature of the reserve adjustment problem, the process by which excess reserves are minimized, the instruments employed in making the adjustment, and the comparative behavior of large District banks in their holdings of excess reserves.

The Operation of the Adjustment Process

The task of adjusting the reserve position of a large bank is assigned to a money desk which may be operated by the cashier, the investment vice president, or, less frequently, by another officer of the bank. The principal bank policies which affect the nature of the operation are management's attitude toward borrowing, whether from the Reserve Bank or from the federal funds market, and restrictions on the method employed to dispose of excess funds.

One of the requisites of the management of the reserve position is the establishment of a system throughout the bank whereby the money desk is informed of all major actions that affect the money position. Such actions include large transfers into or out of customers' accounts, purchases or sales of securities for customers or the bank's own portfolio, withdrawals from or additions to the U. S. Treasury Tax and Loan accounts, and sizable loan extensions or retirements. These known changes, together with any events whose effects can be foreseen—such as redemptions of securities, loan commitments, and so forth—constitute the principal data used to gauge the forces affecting the current reserve position of the bank.

Federal Reserve regulations governing the determination of legal required reserves form another part of the framework within which the adjustment is made. Reserve requirements are applied to average deposits in a week that begins with the opening of business on Thursday morning and closes the following Wednesday morning. The balances which fulfill these requirements are the deposits of the bank at the Reserve Bank in the week which begins with the close of business on Thursday and ends with the close of business on the following Wednesday. Thus, on any Wednesday morning, the bank knows its requirement for the preceding 7 days and its reserve balance for the preceding 6 days. Therefore, if it becomes evident during the day that a deficiency will occur, steps can be taken to raise the balance by a sufficient amount to meet the minimum requirement. On the other hand, expected surpluses can be placed in assets that will yield earnings for the bank.

Subject to approval in the individual case, current regulations allow a member bank to carry a reserve deficiency of not more than 2 per cent into the succeeding reserve period, provided a deficiency did not occur in the preceding period and provided the reserve balance in the next period is sufficient to counterbalance the deficiency. Banks occasionally employ this privilege, not perhaps as a conscious policy, but rather as a result of minor errors in forecasts. Penalties are assessed against larger reserve deficiencies at a rate 2 per cent above the discount rate, so banks have an incentive to hold somewhat more than the minimum to avoid this charge.

The process of reserve adjustment may be illustrated from the records of two District banks of approximately equal size. As seen by the data, one trims its reserve position very closely and the other runs larger-than-average excesses. Bank A had a cumulative excess reserve of $663,000 in the reserve period which on a daily basis was $94,714. Bank B had a cumulative excess of $13,124,000, an average daily excess of almost $1,875,000. Bank A curtailed its reserves on the last day of the reserve period by sales of federal funds, but the cumulative excess of Bank B expired, as the surpluses of one reserve period cannot be used to meet the requirements of the following period. Assuming an interest rate of 3

per cent, a sale of $13 million for one day would have produced earnings of $1,083; at a rate of 3½ per cent, the transaction would have yielded $1,284.

	Bank A	Bank B
	Excess (+) or deficiency (—) of reserves	
Thursday	$—1,144,000	$ +1,650,000
Friday	+996,000	+986,000
2-day total	—148,000	+2,636,000
Saturday	+273,000	+392,000
3-day total	+125,000	+3,028,000
Sunday	+273,000	+392,000
4-day total	+398,000	+3,420,000
Monday	+579,000	+1,594,000
5-day total	+977,000	+5,014,000
Tuesday	+1,160,000	+5,642,000
6-day total	+2,137,000	+10,656,000
Wednesday	—1,474,000	+2,468,000
7-day total	$ +663,000	$+13,124,000

Methods of Reserve Adjustment

The principal methods employed by the larger District banks in adjusting reserve positions include variations of indebtedness to the Reserve Bank, purchases or sales of funds in the federal funds market, and purchases or sales of short-term Treasury issues. These three methods may be compared first as ways of covering a deficiency of reserves and then as methods for disposing of excess funds.

The use of the Reserve Bank discount privilege has the advantage that the exact sum needed to cover the deficit of reserves can be borrowed. Also important to some banks is the fact that no borrowing limit is imposed apart from the necessity of having acceptable collateral or rediscountable paper. Banks which experience rather wide fluctuations of deposits may rely heavily on this source of reserves since their ability to borrow from other sources is limited by law. Other advantages of discounting are the ease with which the transaction is consummated and the ready availability of funds. A bank can wait until very late in the business day before covering its deficiency, and while this also may be possible in the securities and federal funds markets, the earlier closing of eastern markets would make these avenues of adjustment less reliable for District banks.

Funds also may be borrowed—usually for one day—from other banks, security dealers, or other organizations, in what is known as the federal funds market. Most of these transactions flow through the wire transfer system of the Federal Reserve banks, moving reserve balances from banks having excess funds to banks having deficiencies. Under normal circumstances, the minimum transaction is $1 million. This restriction prevents banks from borrowing from the federal funds market when they require less than $1 million, or from using that market to dispose of excess reserves of less than $1 million. Another important restriction on use of this market is the prohibition against national banks' borrowing a greater amount than their capital stock. Since banks often experience short-term outflows of reserves that exceed their capital, these exigencies cannot be met through the federal funds market.

There are two principal advantages of this market as a source of funds. At times, the rate of interest is less than the discount rate, permitting reserve deficiencies to be covered at reduced cost. A substantial part of the purchases of funds by District banks over the past year has coincided with declines in the federal funds rate. Use of the market also permits a bank to curtail its borrowing from the Reserve Bank. Since continuous borrowing is not in accord with the provisions of Federal Reserve Regulation A, a number of banks employ the market for ordinary adjustments and conserve the privilege of borrowing from the Reserve Bank for more extreme emergencies.

The chief problem in using the Treasury bill market as a source of funds arises from rate fluctuations and the costs of the transaction. If rates should rise and prices fall after bills are purchased, losses may occur when

the security is sold. Moreover, the spread between bid and asked quotations, which is the dealer's margin, may absorb interest earned over a short period. These disadvantages often are surmounted by the use of repurchase agreements in which bills or other securities are sold for immediate delivery and purchased for regular delivery a day later. The rate on the transaction for the one day is usually the same as the rate on federal funds and thus the purchase and sale prices are fixed in advance. Recent rulings have declared these contracts to be loans, rather than purchases and sales of securities, and to be subject to the restrictions placed by law upon loans. In fact, this type of transaction bears a closer resemblance to a reserve adjustment via the federal funds market than to an adjustment through the bill market as such.

Each of these instruments is used as a method of disposing of excess reserves. Banks with indebtedness to the Reserve Bank can pay down their discounts. Those without debts either sell funds or acquire Treasury bills. If the excess is large compared with the loan limit of the bank, several separate transactions in federal funds may be required to reduce the reserve balance to an acceptable level. If the amount is small, the minimum size of a transaction may prevent the use of the funds market. Several banks follow the practice of purchasing the maturing Treasury bill late in the reserve period to be presented for redemption on Thursday—the first day of the new reserve period. This operation carries the excess forward into the next period and a return is earned for the period of investment. Demand for the maturing bill for this purpose frequently makes it difficult to obtain and drives the interest rate below the rate obtainable on federal funds.

The practices of larger District banks in using these methods of reserve adjustment follow no clear-cut pattern. A few banks use all three, both in acquiring and disposing of reserves. Others rely on the Federal Reserve Bank when reserves are needed and sell excess funds when their indebtedness has been discharged. Still others employ the federal funds market exclusively, but rarely purchase funds. These are banks which, as a matter of policy, hold comparatively large liquid reserves.

Data are not available through which an evaluation can be made of the comparative importance of the three instruments of adjustment in District bank operations. The information for discounts alone is displayed in the chart of borrowings and repayments of the 23 banks whose performances are compared in a later section. In the chart, discounts include the increases of average daily indebtedness to the Reserve Bank compared with the preceding week. Repayments reflect the reductions of such indebtedness. The movements of the two lines express the volume of reserve adjustments made from week to week through the discount facility. If daily changes had been shown, the variations would have been much greater. Judging on the basis of rough measures, such as week-to-week changes in federal funds borrowed or sold and in bill holdings, a larger volume of reserve adjustments is made through the open market than is made through discounting.

Chart 1. BORROWINGS FROM AND REPAYMENTS TO THE RESERVE BANK

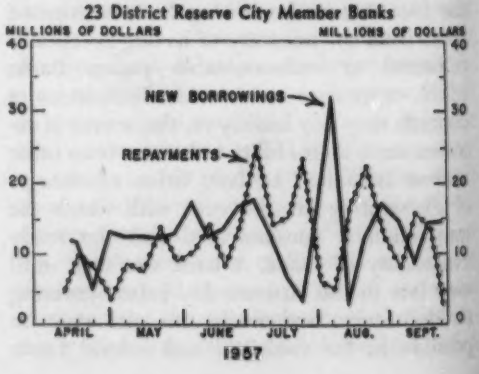
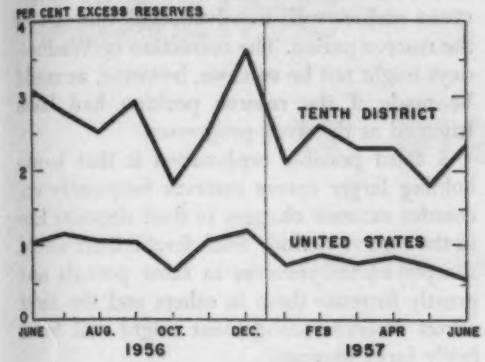


Chart 2. EXCESS RESERVES OF RESERVE CITY BANKS
Tenth District and United States



District Bank Experience

Another aspect of city bank reserve adjustments is the comparative results achieved in minimizing excess reserves. One test of this operation can be made by comparing District results with those of reserve city banks in the United States. Average daily excess reserves in percentages of required reserves for the two groups of banks are shown in Chart 2. There it is evident that District reserve city banks as a group carry excess reserves which are quite high in relation to the national average for reserve city banks. If District banks had achieved the national average in the period shown, their average daily excess reserves would have been lower by $8.9 million, or more than 50 per cent.

The data for individual banks are useful in locating the sources of this difference. The accompanying tables summarize information on 23 of the larger District reserve city member banks having deposits in excess of $30 million. Their performance in managing their reserve positions was measured on the basis of 52 reserve periods in 1956 and 34 reserve periods in 1957.

Inspection of Table 1 indicates that among these banks the absolute volume of excess reserves held shows no clear relation to bank size, although in percentage terms the maximum ratio diminishes with increasing size of the bank. Moreover, in each size class, there is a substantial spread between the highest and lowest volume of excess reserves held. However, most of the banks in each class held amounts close to the minimum shown. This is generally indicated in Table 2, showing a frequency distribution of excess reserve holdings in 1956. Most of the smaller banks and more than half of the larger units were able to hold average excess reserves to less than $300,000. It is clear from the two tables that the difference between reserve city banks in the District and the Nation shown in the chart is largely attributable to the performance of a few banks. Approximately half of the 23 banks consistently maintained ratios below the national average, which suggests that regional factors are not the source of the difference.

Table 1. AVERAGE DAILY EXCESS RESERVES BY SIZE OF BANK
23 District Reserve City Member Banks

Sizes as Indicated by Average Required Reserves (Millions of dollars)	No. of Banks	Range of Average Daily Excess Reserves			
		In Thousands of Dollars		In Percentages of Required Reserves	
		1956	1957	1956	1957
Less than 10	6	57-1,095	81- 774	1.24-13.61	1.80- 9.39
10 and less than 20	8	28-1,250	37-1,185	0.20- 7.16	0.34-10.34
20 and less than 30	4	208-2,657	160-1,519	0.77- 7.11	0.58- 5.96
30 and over	5	109-1,783	69-1,717	0.30- 3.19	0.32- 2.94

Table 2. FREQUENCY DISTRIBUTION OF EXCESS RESERVES, 1956 AVERAGES

23 District Reserve City Member Banks

Amount of Average Daily Excess Reserves (In thousands of dollars)	Bank Size Expressed in Terms of Average Required Reserves	
	No. of Banks	
	$15 million or less	Over $15 million
Less than 100	3	1
100-199	4	4
200-299	2	2
300-399	0	0
400-499	0	1
500-999	2	1
1,000 and over	0	3
Total	11	12

Other conditions also may be thought to account for the differences in holdings of excess reserves. One is the method of adjustment used by the bank. However, comparisons of banks as to whether preference was given to the open market or to discounting revealed only one interesting difference. Banks whose managements do not employ the discounting privilege or do so only rarely were not among those having comparatively large excess reserves. Since much emphasis is placed upon this privilege as a necessary adjunct to the adjustment process, it is of interest that some banks did not find its use essential to their reserve management.

A second possible explanation is that the accounting systems of some banks cannot supply information with sufficient promptness for action to be taken to dispose of excesses or to cover deficiencies. This may lead some banks to hold a sufficient quantity of excess reserves to assure that the penalties of a reserve deficiency will not be levied. While there may be some differences of accounting, these do not appear likely to explain the larger excesses of reserves. Virtually any system of information would make known the accumulation of an excess through a reserve period—as in the case of Bank B in the illustration given earlier—well in advance of the end of the reserve period. The correction on Wednesdays might not be so close, however, as could be made if the reserve position had been trimmed as the week progressed.

A third possible explanation is that banks holding larger excess reserves frequently encounter extreme changes in their deposits late in the reserve period. Such fluctuations would sharply curtail reserves in some periods and greatly increase them in others and the most adroit reserve management might still leave fairly large excesses.

In order to evaluate this possibility, the records of three banks which held the largest excesses were examined for a period of 62 weeks. Changes in deposits from Tuesday to Wednesday in each week were classified by size of change. In two of the banks, it was found that two thirds of the changes fell between plus and minus $2 million, while in the case of the third, approximately 80 per cent of the changes were within that range. Since an average daily excess of $1.5 million, such as these banks carried, would produce a cumulative excess of $9 million in the first 6 days of the reserve period, it is obvious that these fluctuations were comparatively small. In fact, none of the banks experienced a gain so large as to have created an excess of that size or a loss that would have reduced such an accumulated excess to zero.

Since none of these alternatives seem adequate to explain differences in holdings of excess reserves, it would appear that the reason lies in differences in management objectives at individual banks. In other words, some banks seek to achieve as near zero excess reserves as is possible while others prefer to hold a portion of their liquid assets as excess balances with the Reserve Bank.

GRAZING

is Big Business

in the Tenth District

ALTHOUGH FARMING IN the Tenth Federal Reserve District is diversified, grazing is important throughout the region and in some areas is a highly specialized activity. Cattle and sheep, on an average, account for more than two fifths of District agricultural income. In recent years, cash receipts in District states from the sale of these animals, dairy products, and wool averaged almost $2 billion annually. Since cattle and sheep are primarily roughage consumers, they provide the major outlet for a vast quantity of grazing resources.

A huge investment in livestock is necessary for efficient use of the grazing resources in the District. Thus, consideration must be given to the proper financing of the appropriate livestock programs. Since the specific program that is most appropriate depends on numerous factors, it is necessary for the owners of the livestock, owners of the roughage, and the financing agencies to be familiar with the various problems involved.

About two thirds of the total farm land in the District is used for some type of permanent or rotation pasture. The winter cereals, sorghum stubble, and stalk fields also frequently provide large amounts of supplemental grazing. In addition to the farm land that is grazed, about a fifth of the total area of the District is owned by the Federal Government and a large part of this land is grazed under contract. This article delineates the major farming areas in the District for the purpose of describing and discussing the major kinds of grazing resources and the programs followed in utilizing these resources in each area.

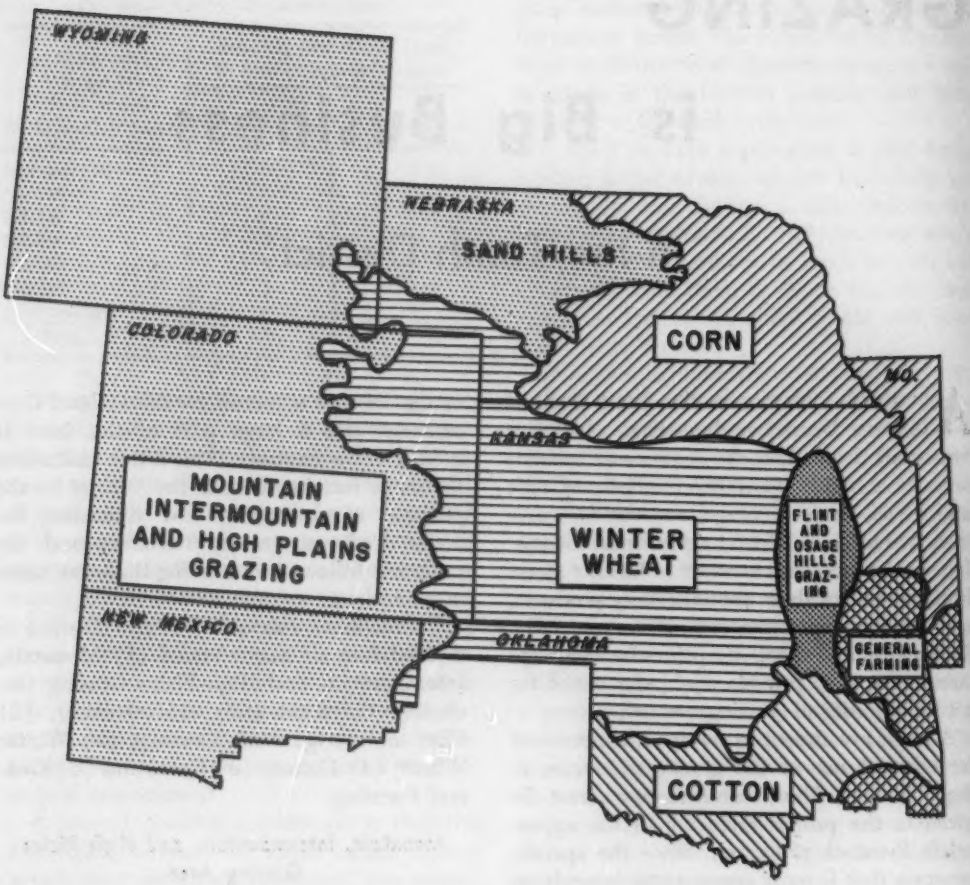
To facilitate this analysis, the District is divided into six major areas: (1) Mountain, Intermountain, and High Plains Grazing (including the Sand Hills of Nebraska); (2) Flint and Osage Hills Grazing; (3) Winter Wheat; (4) Cotton; (5) Corn; and (6) General Farming.

Mountain, Intermountain, and High Plains Grazing Area

This range livestock grazing area includes the Sand Hills of Nebraska and almost all of the states of Wyoming, Colorado, and New Mexico. Although many crops are produced within this territory, the soils, elevation, topography, and climate are best suited to range livestock production. Rainfall usually is low and uncertain and crop production is hazardous except under irrigation.

Generally, the range livestock economy of this region is based upon the interdependent

TENTH DISTRICT FARMING AREAS



relationship of irrigated lands, meadows, and large acreages of private and public range land. Irrigated acreages, other cultivated land, and meadows provide hay, pasture, and other winter feed for livestock.

The type of grazing operation varies widely. In parts of New Mexico and southwestern Colorado, year-long grazing is predominant. In the remainder of this grazing area, seasonal grazing is practiced either on a migratory or nonmigratory basis.

In much of the mountain and intermountain sectors, migratory seasonal grazing is practiced. Livestock are grazed on vast stretches of grass and brush covered land surrounding the mountain ranges in the fall, winter, and spring. The pasture is supplemented with other feeds during the winter period. In the

summer, the animals frequently are moved to mountain pastures.

Sheep often are moved relatively long distances from one seasonal range to another. Cattle in the intermountain and mountain areas where seasonal grazing is practiced are handled in numerous ways. Some are placed on mountain ranges from 3 to 5 months during the summer and are pastured on intermountain ranges from fall to spring with supplemental feeding being provided during the winter. Others are kept on different intermountain ranges throughout the year and are provided with supplemental feeding during the winter. There are various adaptations of each of these methods for handling cattle.

In the part of the mountain, intermountain, and High Plains region that borders the Winter Wheat Belt, migratory seasonal grazing frequently is practiced by moving the livestock to wheat and sorghum stubble pasture during the fall and winter. The dates of moving to wheat and sorghum stubble pasture and the periods of grazing vary according to the condition of the crops.

In some parts of the area, such as in the Sand Hills of Nebraska and in northeastern Wyoming, nonmigratory seasonal grazing is practiced. In the Sand Hills area, hay for wintering the breeding herd is frequently harvested from meadows of native grasses. This hay is used along with soybean meal or cottonseed cake for wintering. In other of the nonmigratory seasonal areas, ranchers have irrigated land on which they produce hay for wintering the breeding herd.

Although numerous types of livestock programs that emphasize grazing are followed in this area, the most prevalent one is that of keeping a cow herd and producing feeder cattle. This type of program is ideally adapted for utilizing the abundant supplies of roughage that are scattered over vast stretches of land. Sheep production also is important in much of the area.

Flint and Osage Hills Grazing Area

The Flint and Osage Hills area is located in the eastern part of Kansas and in northeastern Oklahoma. Frequently referred to as the Bluestem Belt, it is one of the most important grazing sections in the Nation. Most of the land is in native pasture. The principal grasses are big bluestem, little bluestem, side oats grama, Indian grass, and Kentucky blue grass. The bluestem grasses comprise well over half of these grasses.

The soils are of limestone origin. The parent limestone was high in silica content, and as it leached, fragments of rock were left which have a resistant, flinty surface. As a result, the soils are thin, filled with rock fragments, and the surface portion frequently is acid. These conditions, combined with the rolling to hilly topography, make it impractical to grow cultivated crops on much of the upland. Consequently, it is a highly specialized grazing region.

Some fertile cropland exists in the creek and river valleys. The major crops grown on this land are corn, sorghum, and alfalfa. These crops are useful in supplying supplemental winter feed for cattle kept in the area on a year-long basis. Because of the abundance of grass, little if any supplemental feeding usually needs to be done from approximately mid-April until fall. Although the number of cattle kept on a year-long basis is increasing in relative importance, pasture leasing continues to be a significant method for utilizing the grass throughout much of the area.

Many cattle are shipped into the Flint and Osage Hills area, primarily for spring and summer grazing while en route to market. This stopover grazing usually is done on a contract basis at so much per head. The terms of the leases or contracts vary. In most contracts, the owner of the cattle agrees to pay the pasture operator a stated amount of money per head for the privilege of grazing a given number of cattle for as long as the cattle own-

er wishes during the usual grazing season of 6 months. The pasture operator usually agrees to receive the cattle at the nearest railroad unloading point, count the cattle, be responsible for strayed or stolen cattle, furnish salt, keep up fences, furnish water, and otherwise care for the cattle. He also agrees to provide a stated number of acres of pasture per animal during the grazing season.

The rate per head charged under the pasture contracts varies widely, depending upon such factors as type of animal, cattle prices, quality of grass, number of acres per animal, and supplies of other roughage and grazing available in the localities from which the Flint and Osage Hills cattle originate. Since the end of World War II, rates on aged steers have varied from an average low of about $11 in 1946 to an average high of about $27 in 1952. The average number of acres of grass guaranteed per head varied from a low of 4.8 in 1946 and 1950 to an average high of 5.6 in 1957. In 1957, the rate for aged steers was about $20.70. Preliminary indications are that rates this spring will be about the same as last year, but that the acreage guarantee will be less since the drought has been broken.

Although there is substantial variation, cattle grazed on pastures in this area during the spring and summer will gain from one to two pounds per day. If pastured for 5 months in a normal year, a yearling steer should put on an average gain of about 225 pounds. Some of the cattle marketed off the bluestem pastures are slaughtered as grass-fat cattle. In recent years, however, the trend has been toward shipping a larger proportion of the cattle from these pastures to feed lots as feeders.

Winter Wheat Area

The major Winter Wheat area in the District is located in northwestern Oklahoma, central and western Kansas, southwestern Nebraska, and eastern Colorado. Although production of hard winter wheat is emphasized, other farm enterprises also are important. Sorghum production has become important throughout much of this area. In addition, relatively large acreages of land adjacent to streams have a rough topography and, thus, remain in permanent pasture. In localities where large acreages of permanent pasture are available, cow herds tend to predominate. In the localities of major wheat and sorghum production, migratory seasonal grazing tends to be followed.

In years of adequate fall and winter precipitation, winter wheat not only is a good cover crop for preventing wind erosion, but it also provides excellent winter and early spring pasture. Since wheat operations are found on the flat lands where little permanent pasture is available, little livestock is kept on a permanent basis on farms located on such lands. Thus, when wheat pasture is available in the hard land areas in which wheat production predominates, substantial numbers of cattle and sheep are brought in for seasonal grazing.

Grain sorghum production also has become quite important in the Winter Wheat area. Although sorghums are grown more intensively in areas where soils are light and sandy, production is important throughout the area. Production of grain sorghum also frequently provides for abundant grazing on a migratory seasonal basis. If the crop matures, the stubble remaining after harvest can be grazed profitably by either cattle or sheep. If the crop does not mature because of drought or for other reasons, the plants provide excellent pasture.

Migratory seasonal grazing of sorghum stubble and winter wheat pasture supplement each other ideally. Although there is substantial variation from year to year, depending on crop conditions, the sorghum crop usually provides pasture either in the form of stubble or immature plants at an earlier date than does winter wheat. Thus, cattle or sheep can be moved into the area and pastured on the

sorghum land for several weeks and then be moved directly on wheat pasture. If both kinds of grazing become available at the same time, there are instances in which it is advantageous to move livestock from wheat pasture to sorghum stubble pasture and vice versa. Furthermore, livestock frequently do better on wheat pasture if it is supplemented with a dry roughage. Sorghum stubble provides such a roughage. Regardless of the method used, it is advantageous to have both types of grazing available at about the same season so the crops can be utilized with one movement of livestock.

The methods for using the wheat and grain sorghum stubble pasture vary widely. Farmers who have the pasture may graze the wheat or sorghum land with livestock that they have purchased themselves. The kind and grade of livestock purchased will depend on such factors as preference of farmer, kind and quality of pasture available, and relative price of livestock at time of purchase in relation to anticipated sales price.

Many of the farmers producing winter wheat and sorghum have little if any permanent pasture. Furthermore, winter wheat and sorghum pasture are available only for a limited season in some years. Because of these farming characteristics in this area, many crop farmers prefer to lease their seasonal pasture when it is available rather than purchase the livestock themselves. Thus, leasing out winter wheat and sorghum pasture may be of substantial importance.

The type of contract arrangement entered into between the owner of the roughage and the owner of the livestock varies. Numerous factors, such as the kind and class of livestock to be pastured, type of pasture available, kinds and quantities of feed available in competing areas, supplies of livestock, and livestock prices, influence the agreement.

Most of the sheep that have been pastured on wheat or sorghum pasture in recent years have been pastured on contract. Two general types of contractual arrangements are used for pasturing sheep on wheat or sorghum pasture.

The most prevalent arrangement is for the owner of the sheep to rent the wheat or sorghum pasture directly from the producer of the crops. Under this arrangement, the owner of the sheep provides for any necessary fencing, watering facilities, labor, and for all care of the livestock. the crop producer provides only the pasture. Payment for the pasture is usually on the basis of a specified amount per head per day. This rate varies substantially with the kind of pasture and from year to year. During the past fall and this winter, prevalent rates have usually been within a range of from 1 to 1½ cents per head per day.

The other general method used is for the owner of the pasture to provide for the fencing, watering facilities, labor, and all care of the animals and to pasture the sheep on a per-pound-of-gain basis. Under this type of arrangement, specific agreement must be made in advance pertaining to such details as method of weighing in and out, death loss, ownership of pelt in case of death loss, and rates. Again, the rates vary depending on such factors as sheep prices, feed supplies, and agreement on the previously mentioned details. During the past fall and this winter, the normal rate paid has averaged around 15 cents per pound of gain.

If cattle are pastured on winter wheat or sorghum pasture, the farmer having the pasture may buy the cattle and control them himself. However, it is not unusual for cattle to be pastured on a contract or lease basis. If cattle are pastured on a contract basis, two general types of arrangements also are used.

One arrangement is for the farmer having the pasture to provide for fencing, water, and care of the cattle, and to be paid a specific amount per hundred pounds of weight for a

specified period of time. In some instances, an additional fee per head is agreed upon for care of the cattle. The rate in any given instance is influenced by numerous factors. This year the rates have been influenced substantially by the abundance of feed in relation to cattle numbers. Rates vary considerably from farm to farm and from one territory to another. A rather common rate during the past fall and this winter has been 50 cents per hundredweight per month on a weigh-in basis with a considerable number of contracts in some areas specifying a 50 cents per head additional charge for care of the cattle. Provisions pertaining to death loss vary widely from contract to contract. Therefore, in order to prevent misunderstanding, a specific agreement should be made pertaining to death losses when this arrangement is used.

A second general arrangement frequently used is for the person with wheat or sorghum pasture to contract on a per-pound-of-gain basis. Under this type of agreement, the farmer with the pasture provides for fencing, watering facilities, labor, and care of the livestock. Although details pertaining to such factors as weighing in and out and death loss may vary, contracts of this type usually are rather uniform. Rates this year have varied widely, but in general, farmers with pasture have received from 12 to 15 cents per pound of gain.

Cotton Area

In the Cotton area, located in southern Oklahoma, a number of farm enterprises are important. Wheat, grain sorghum, and in some parts of the area, range livestock, are significant, in addition to cotton. On some farms, cotton production is highly specialized, while on others, no cotton is grown and wheat is the major enterprise.

Other than the fact that cotton production is important on some farms, the cropping and grazing systems do not differ substantially from those found in the winter wheat area. In those parts of the area where range livestock production is important, cow herds tend to predominate. On those farms where the winter cereals and sorghum stubble provide seasonal grazing, some type of migratory grazing program usually is followed. The methods for utilizing the grazing resources in this area are similar to those used in the winter wheat area. In those instances where pasture is leased, the arrangements also tend to be similar to those used in the winter wheat area.

Corn Area

The Corn Belt area of eastern Nebraska, northeastern Kansas, and western Missouri has soils that are inherently quite productive. Native vegetation originally consisted of tall, mixed, and short grasses. Since the topography of much of the Corn Belt area located in the Tenth District is rolling, a considerable percentage of the land remains in some type of permanent pasture.

The cropland, although fertile, requires careful soil management because of its slope and susceptibility to erosion. Thus, a considerable acreage of grasses and legumes is grown for protective cover. These crops, along with the permanent pasture, pasture from the winter cereals, and stalk fields, provide for a substantial amount of grazing.

The kind and variety of crops grown and the smaller size of farm as compared with the two major grazing and winter wheat areas, have resulted in the development of different kinds of grazing programs. Abundant supplies of hay, pasture, and feed grains have caused farmers to emphasize cattle feeding programs that utilize large quantities of both roughage and concentrate feeds. Some cow herds are kept in the area, but in most cases, adequate size herds for economical operation cannot be kept. Thus, feeding programs that require large amounts of roughage have

been increasing in relative importance. Besides other advantages, they enable farmers in this area to utilize efficiently the available grazing resources along with feed grains.

General Farming Areas

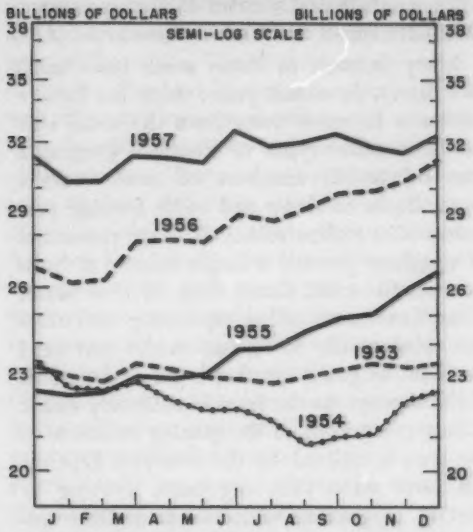
In the General Farming areas, the climate and soils favor many types of farm production with no single enterprise having an outstanding advantage over the others. Corn, wheat, oats, hay, soybeans, fruit, and truck crops are important crops on the tillable land. In addition to the cropland, a substantial proportion of nontillable land can be grazed.

Fertility of the soils throughout much of these areas is generally low and, therefore, both pasture and hay crops have a place in the rotations on the cropland to maintain and improve the soils. This type of cropping system requires livestock for effective utilization of the available pasture and roughage. Thus, a substantial number of cattle and some sheep are found on farms in these areas.

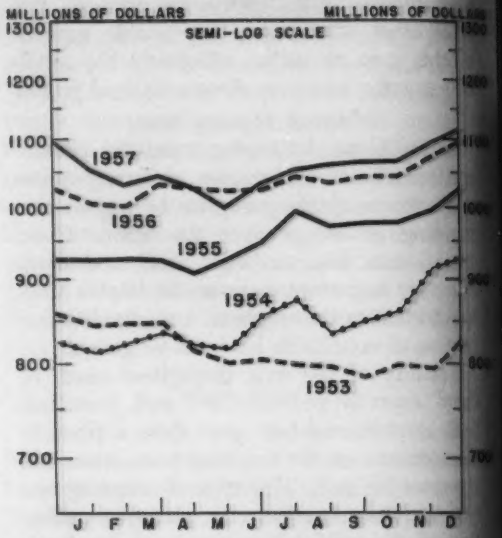
Many farmers in these areas have small cow herds. In recent years, there has been a tendency to move away from the small cow herds to other types of livestock programs, but substantial numbers of cows remain. Farm flocks of sheep and cattle feeding programs that utilize relatively large quantities of roughage provide a larger volume of business on the small farms than do cow herds. Thus, farmers are either expanding their acreage substantially to remain in the cow herd business, or going to other types of programs if the acreage in the farm is relatively small. A large proportion of the grazing resources in the area is utilized by the livestock kept on the farm on a year-long basis. Leasing or renting of grazing resources is of little importance in these general farming regions.

BUSINESS AND AGRICULTURAL LOANS AT WEEKLY REPORTING MEMBER BANKS

United States



Tenth District



NOTE: On a semi-logarithmic scale, equal slopes indicate equal rates of change.

BANKING IN THE TENTH DISTRICT

District and States	Loans				Deposits			
	Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks	
	December 1957 Percentage Change From							
	Nov. 1957	Dec. 1956	Nov. 1957	Dec. 1956	Nov. 1957	Dec. 1956	Nov. 1957	Dec. 1956
Tenth F. R. Dist.	+5	+5	+3	+5	+8	†	+3	+2
Colorado	+1	+5	†	+5	+1	+1	+1	+5
Kansas	+12	+12	+4	†	+8	−1	+6	†
Missouri*	+9	+5	+2	†	+12	†	+5	†
Nebraska	−1	−1	+3	+7	+7	−3	+4	−2
New Mexico*	**	**	+4	+5	**	**	+1	+7
Oklahoma*	+4	+5	+3	+7	+12	†	+3	+4
Wyoming	**	**	+3	+11	**	**	+1	+6

*Tenth District portion only. **No reserve cities in this state.
†Less than 0.5 per cent.

PRICE INDEXES, UNITED STATES

Index	Dec. 1957	Nov. 1957	Dec. 1956
Consumer Price Index (1947-49=100)	121.6	121.6	118.0
Wholesale Price Index (1947-49=100)	118.4	118.1r	116.3
Prices Rec'd by Farmers (1910-14=100)	242	242	235r
Prices Paid by Farmers (1910-14=100)	299	298	290

r Revised.

TENTH DISTRICT BUSINESS INDICATORS

District and Principal Metropolitan Areas	Value of Check Payments		Value of Department Store Sales		*Value of Residential Building Permits	
	Percentage change—1957 from 1956					
	Dec.	Year to date	Dec.	Year to date	Dec.	Year to date
Tenth F. R. Dist.	+10	+6	−2	−1	+21	+1
Denver	+16	+8	+3	+1	−25	−16
Wichita	+12	+10	−3	+1	+99	−5
Kansas City	+11	+5	−2†	−2†	+77‡	−3
Omaha	+9	+2	+1	+1	+123	−2
Okla. City	+5	+2	−4	−3	+107	+4
Tulsa	+9	+9	−9	−1	−12	−8

*City only. †Kansas City, Mo., only. ‡Kansas City, Mo., and